Human-Systems Integration Processes (HSIP)

Completed Technology Project (2011 - 2013)

Project Introduction

The goal of this project is to baseline a Human-Systems Integration Processes (HSIP) document as a companion to the NASA-STD-3001 and Human Integration Design Handbook. The HSIP describes processes for design and operation of safe and habitable crewed spacecraft.

In FY12, this project removed the commercial-specific content from the Commercial Human-Systems Integration Design Processes (CHSIP), identified gaps in the documented design processes, and generated 5 new process chapters. The new chapters were based on human spaceflight (HSF) program needs and covered a large breadth of topics, from Legibility Evaluation to Design for Decompression Sickness Mitigation. In FY13, the approach is to conduct a Human Health and Performance (HH&P) review of the HSIP, and baseline the content for knowledge capture of HH&P processes and lessons learned, for training of new employees, and for use by current and future HSF programs.

Anticipated Benefits

Although NASA has and is continuing to develop many documents (standards, regulations, guidelines, etc.) dealing with human-systems integration, there is no single document that defines the processes and tools for integrating humans with space systems. For the productivity and safety of future space travelers, it is vital that the procedures, lessons learned, and knowledge gained at JSC and other centers be documented and institutionalized. The current project scope does not include technology development, but will produce an innovative way to facilitate the use of humans in the technology development process, leading to more effective human-system technology.

Human-Systems Integration Processes

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Center Innovation Fund: JSC CIF

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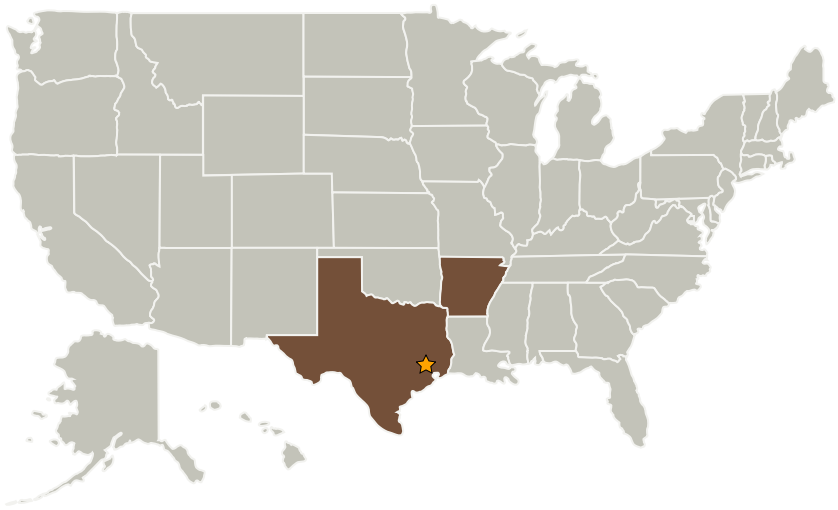
Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
KBRwyle, Inc.	Supporting Organization	Industry	Houston, Texas

Primary U.S. Work Locations	
Arkansas	Texas

Project Management

Program Director:
Michael R Lapointe

Program Manager:
Carlos H Westhelle

Project Manager:
Kerry M Mcguire

Principal Investigator:
Kerry M Mcguire

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.6 Human Systems Integration
    - TX06.6.1 Human Factors Engineering